

REMARKS

In response to the non-final Office Action mailed 9 March 2007, reexamination and reconsideration of the above-identified application are requested in view of the following amendments and remarks.

1. Claims

Claims 14-16 are currently pending; the Office Action of 9 March 2007 indicates that claim 15 is allowed. Claims 14 and 16 are amended, above.

2. New Grounds of Objection: Sequence Numbering

Applicants respectfully submit that there is some confusion about the numbering of the residues in the sequences as submitted in the Sequence Listing, and specifically regarding SEQ ID NO:2 as it relates to SEQ ID NO:3.

For clarity, Applicants have listed the Examiner's comments regarding sequences:

Page 2 of Office Action, lines 11-14:

The specification teaches that SEQ ID NO:3 sets forth the amino acid sequence for a naturally processed HLA-B44-restricted epitope of Her-2/neu, corresponding to amino acids 1021-1030 of the Her-2/neu protein (para 0036 of the published application)

Page 2 of Office Action, lines 14-16:

(T)he specification also teaches that SEQ ID NO:3 consists of amino acid residues EEYLVPQQGF (para 298 of the published application)

Page 2 of Office Action, lines 16-19:

A review of the sequence listing submitted as originally filed, reveals that amino acid residues EEYLVPQQGF are in fact amino acid residues 1005-1014 of SEQ ID NO:2 and not amino acid residues 1021-1030.

Applicants agree that paragraphs 0036 and 0298 of the published application identify SEQ ID NO:3 as the amino acid sequence of a HLA-B44-restricted epitope of Her-2/neu, corresponding to amino acids 1021-1030 of the Her-2/neu protein. Applicants also agree that the Sequence Listing provides SEQ ID NO:3 as EEYLVPQQGF. Further, Paragraph 0035 of the published application states that SEQ ID NO:2 sets forth the amino acid sequence for the Her-2/Neu protein.

Applicants respectfully disagree with the Examiner's statement that residues EEYLVPQQGF (SEQ ID NO:3) do not correspond to residues 1021-1030 of SEQ ID NO:2, but rather correspond to amino acid residues 1005-1014 of SEQ ID NO:2.

Applicants refer to the Sequence Listing filed on 14 August 2001. As stated at paragraph 0034 of the specification, SEQ ID NO:1 sets forth a DNA sequence encoding the Her-2/neu protein. The Sequence Listing provides SEQ ID NO:1 as a 3768 nucleotide DNA sequence encoding a 1255 amino acid sequence; the position of the amino acids is indicated by the numeral underneath the amino acids (see e.g., the initial "Met" which is indicated as amino acid '1'). Amino acids 1021-1030 are shown as Glu-Glu-Tyr-Leu-Val-Pro-Gln-Gln-Gly-Phe (EEYLVPQQGF).

Turning to SEQ ID NO:2, this is identified in Paragraph 0035 as the amino acid sequence for the Her-2/neu protein. Accordingly, the amino acid sequence shown as encoded by SEQ ID NO:1 is the same as the amino acid sequence of SEQ ID NO:2.

The position of the amino acids of SEQ ID NO:2 are also indicated by the numerals underneath the respective residues. See e.g., the first amino acid "Met", which is indicated by the numeral '1' beneath the "Met", or the final amino acid "Val" indicated as 1255 by the numeral beneath. Similarly, the position of the amino acids Glu-Glu-Tyr-Leu-Val-Pro-Gln-Gln-Gly-Phe (EEYLVPQQGF) in SEQ ID NO:2 is indicated by the numerals beneath the residues, namely 1021-1030.

Applicants respectfully submit that the Examiner has mistakenly read the numerals above the amino acid residues in SEQ ID NO:2 as indicating the amino acid position (this provides 1005-1014 for EEYLVPQQGF). This may be due to the page breaks in the Sequence Listing; some pages have a line of numerals as the initial line. However, as shown by the first (or the final) amino acid residue and its corresponding numeral in SEQ ID NO:2, Applicants submit it is clear that the residue position is indicated by the numerals below the residues.

Accordingly, Applicants submit that the specification as filed clearly shows the EEYLVPQQGF sequence as amino acid residues 1021-1030 of SEQ ID NO:2, and that no correction of the Sequence Listing is required.

3. Rejection under 35 USC 112, first paragraph (written description)

Claim 14 stands rejected under 35 USC 112, first paragraph, as lacking adequate written description. Applicants respectfully dispute this rejection.

The Office Action states that the limitation of a fragment of (a) wherein said fragment is at least 100 amino acids in length and comprises residues 1021-1030 of SEQ ID NO:2 has no clear support in the specification as filed. The Examiner states that “amino acid residues EEYLVPQQGF are in fact amino acid residues 1005-1014 of SEQ ID NO:2 and not amino acid residues 1021-1030.”

For the reasons discussed above, Applicants maintain that the specification clearly discloses the EEYLVPQQGF sequence as residues 1021-1030 of SEQ ID NO:2. Applicants respectfully submit that a statement that EEYLVPQQGF corresponds to residues 1005-1014 of SEQ ID NO:2 is based on a mis-reading of the amino acid numbering in the Sequence Listing.

The Examiner notes that “there is indeed support for a fragment of at least 100 amino acids in length and there is support for said fragment comprising SEQ ID NO:3 (EEYLVPQQGF)”. Applicants assert that, as residues 1021-1030 of SEQ ID NO:2 correspond to SEQ ID NO:3, there is clear support for claim 14 in the specification as filed.

Withdrawal of the present rejection is respectfully requested.

4. Rejection under 35 USC 112, first paragraph (Enablement)

Claim 16 stands rejected as failing to comply with the enablement rejection. Applicants respectfully traverse this rejection.

This rejection repeats the contention that amino acid sequence EEYLVPQQGF does not correspond to residues 1021-1030 of SEQ ID NO:2; Applicants respectfully disagree, for the reasons discussed above. However, claim 16 has been amended to recite SEQ ID NO:3. Applicants submit that this has obviated the current rejection.

Withdrawal of the present rejection is respectfully requested.

Conclusion

Applicants submit that the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite prosecution of the application, please do not hesitate to call the undersigned at 919-483-1012.

The Commissioner is hereby authorized to charge any fees required or credit any overpayment to Deposit Account No. 07-1392.

Respectfully submitted,

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